

GIS User Group of Northern Ohio



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May 21, 2010

Agenda

- Enterprise GIS Deployment Patterns

- ArcGIS 10 Desktop Changes

- <http://www.esri.com/software/arcgis/whats-new/videos.html#v1>

- ArcGIS Server and Amazon Cloud Collaboration

- <http://www.esri.com/partners/alliances/amazon/cloud.html>

Deployment Considerations

- Application Criticality

- High availability, 24x7 Environments
- Down time, upgrade considerations

- Service Level Agreements with Business Owners

- Staging Environments

- Fail-over, development, & testing

- Number and Type of User

- Desktop versus Web
- Editor versus Viewer

- Third Party Integration

- Update cycle
- Geoprocessing requirements

Enterprise GIS Deployment

Use these 4 patterns as building blocks



Where to Start?

- **Prioritize Applications**

- Talk to key decision makers, business process owners, directors, developers, technicians, other stakeholders

- **Understand Existing Infrastructure**

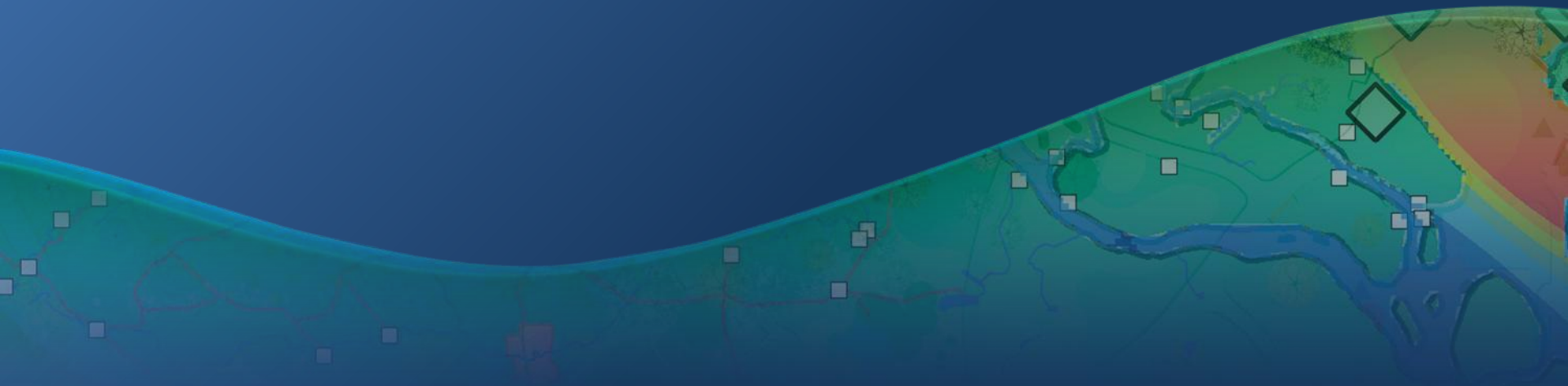
- Bring in IT department, third party application managers
- Know what can and cannot be done with existing resources

- **Utilize Outside Resources**

- Training, templates, services, business partners

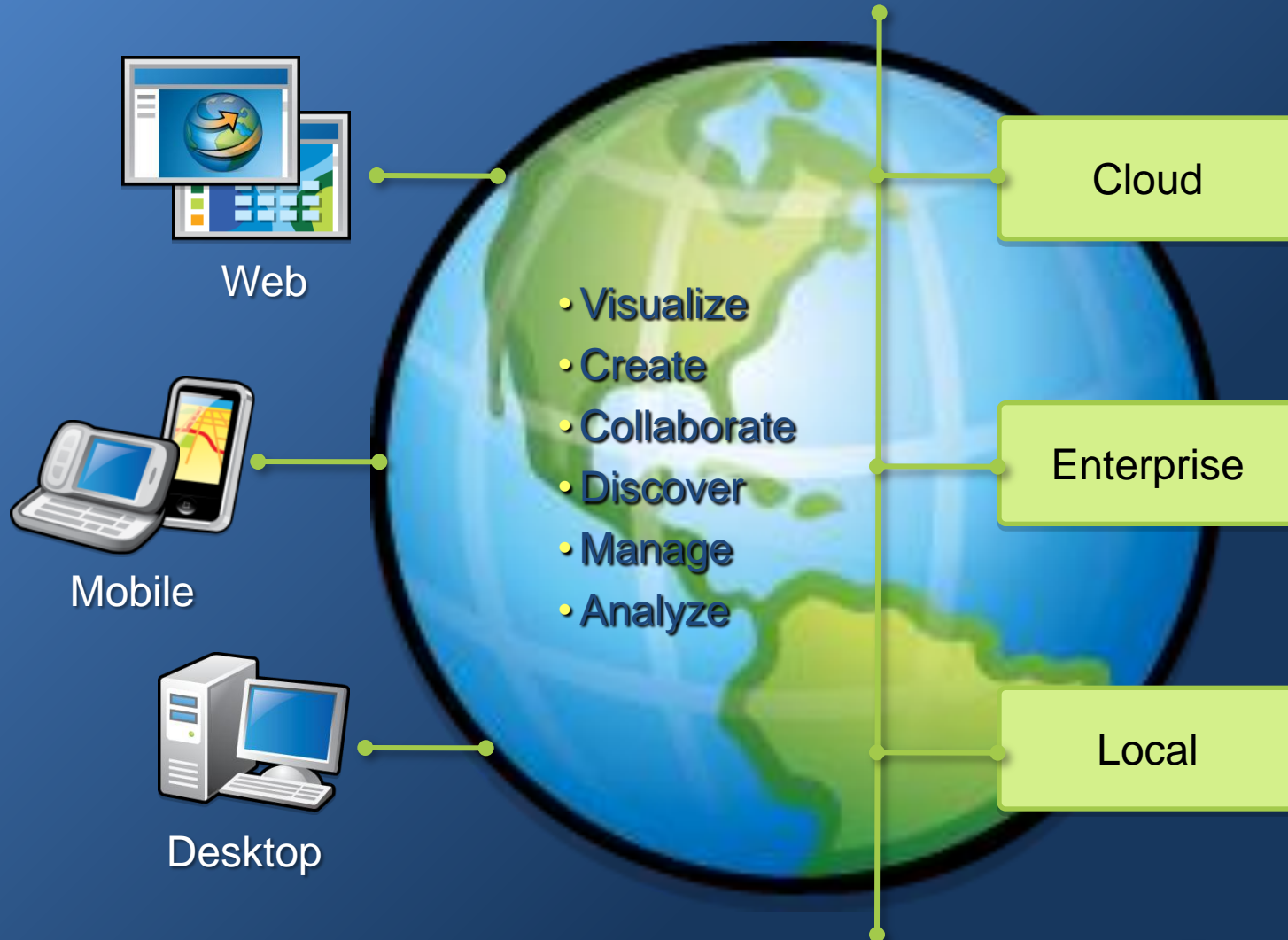
- **Take Advantage of Technology Changes...**

ArcGIS 10 Desktop Changes



ArcGIS 10

A Simple & Pervasive System for Using Maps & Geographic Information



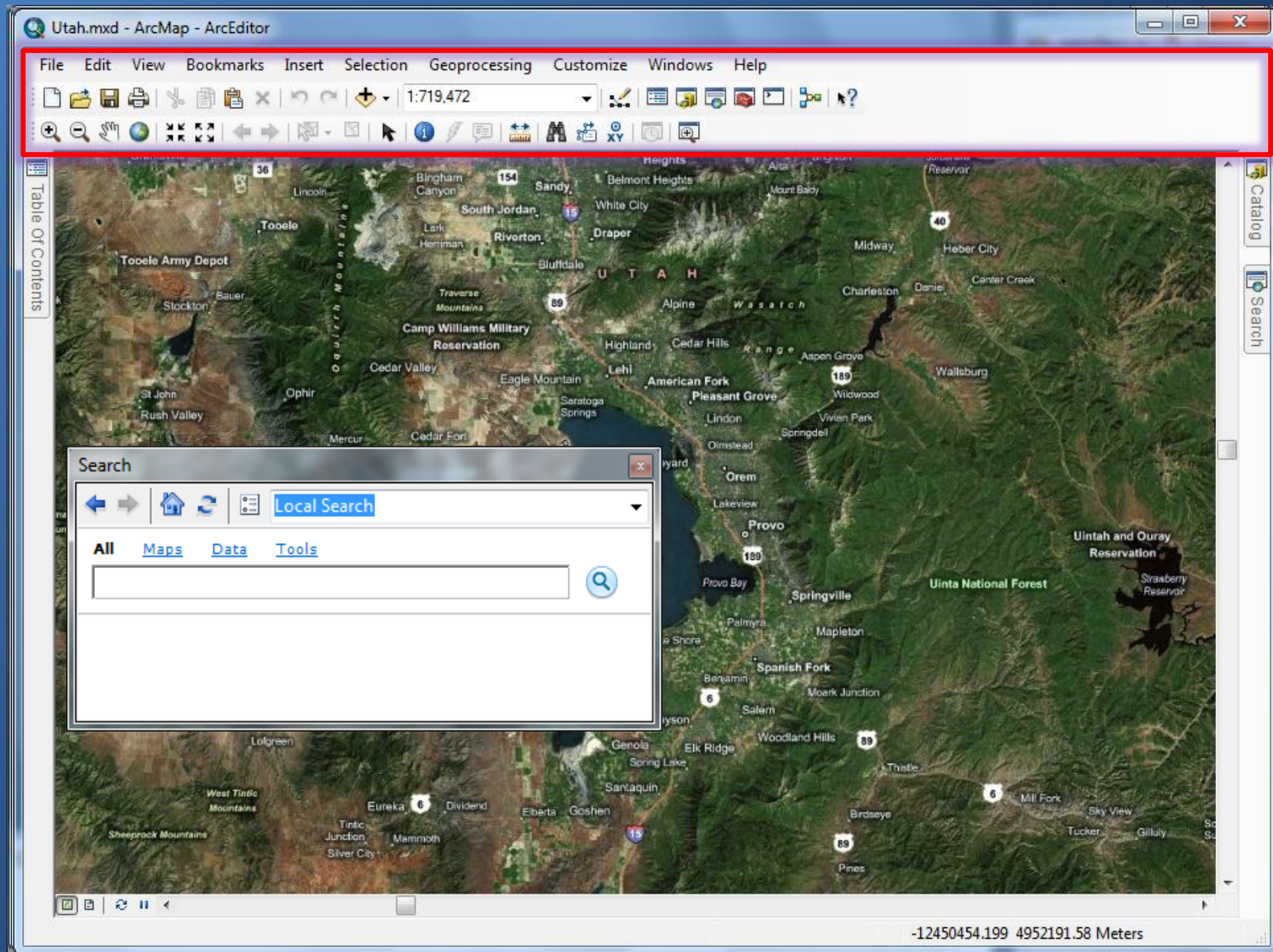
Transforming GIS

Different Deployments of Desktop

- Individual User(s)
 - Power User
 - Many Business Functions and Focus Areas
- Teams and Workgroups
 - Shared resources
 - Multi-Users with different roles
- Departmental / Enterprise
 - Author, Publish and Use
 - Connected services and resources

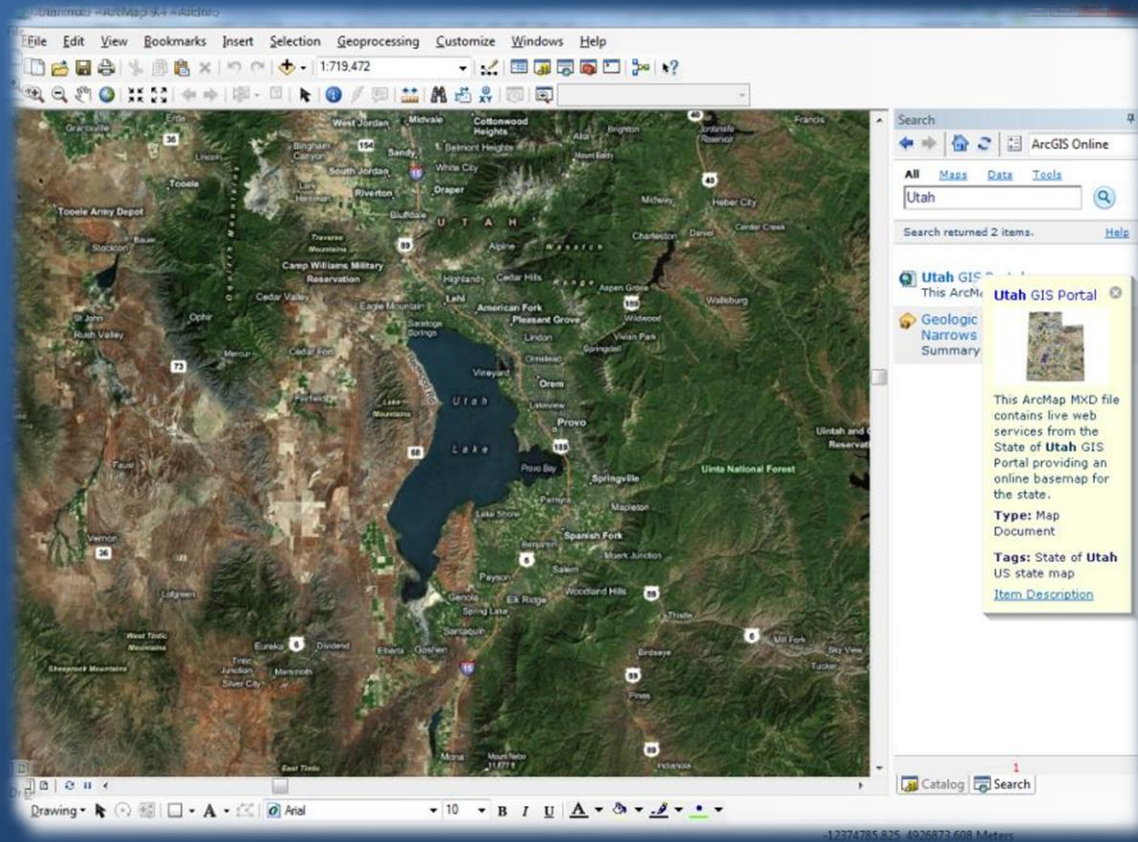


The Focus is on the Map



Find and Use Geographic Information

- Catalog in ArcMap
 - Data Management
 - Project Organization
- Search
 - Data, Layers, Maps
 - Quick Preview
 - Drag and Drop results



Local, Enterprise and Online Search

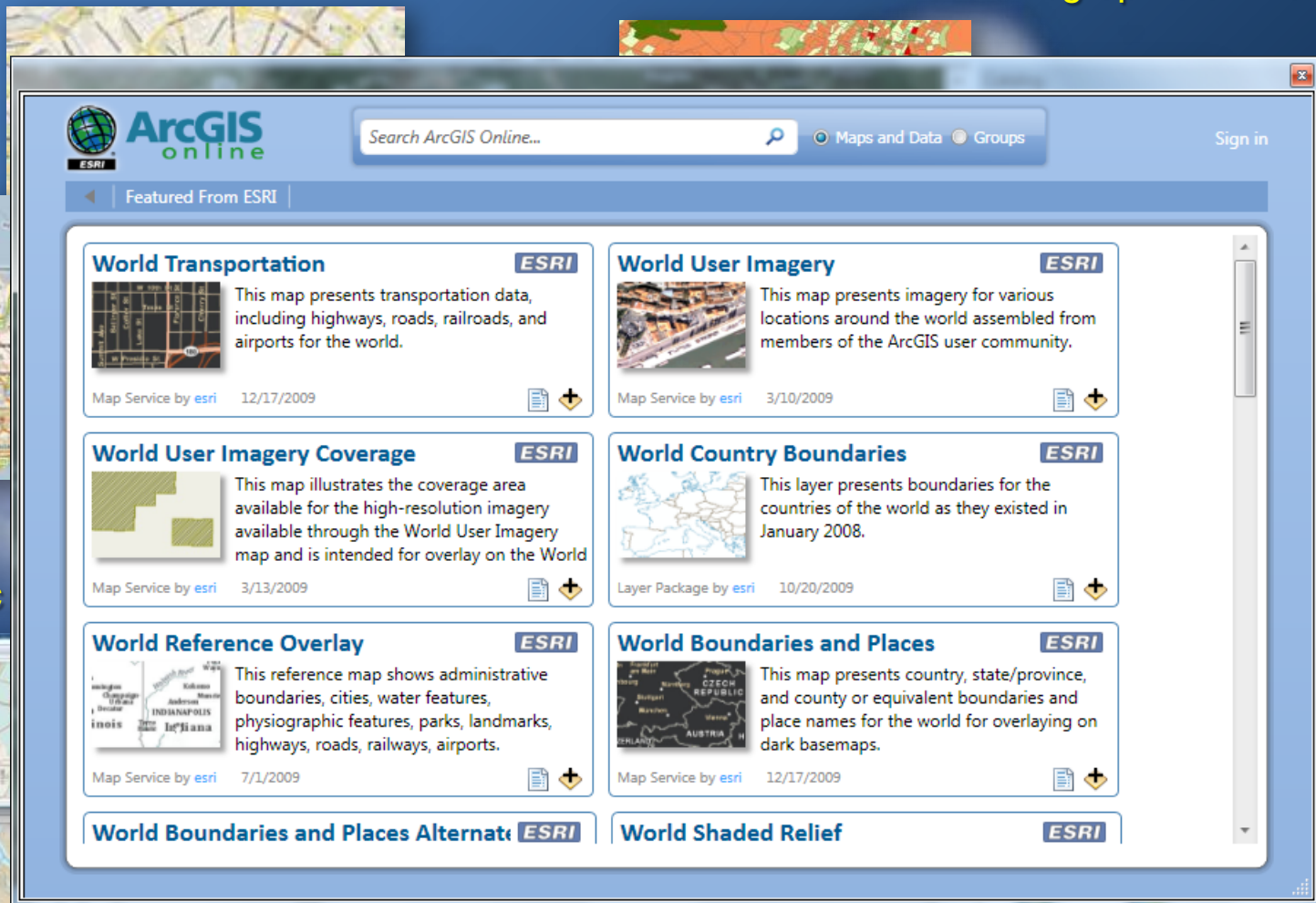
ArcGIS 10 Comes with Content

Demographic & Thematic

Streets

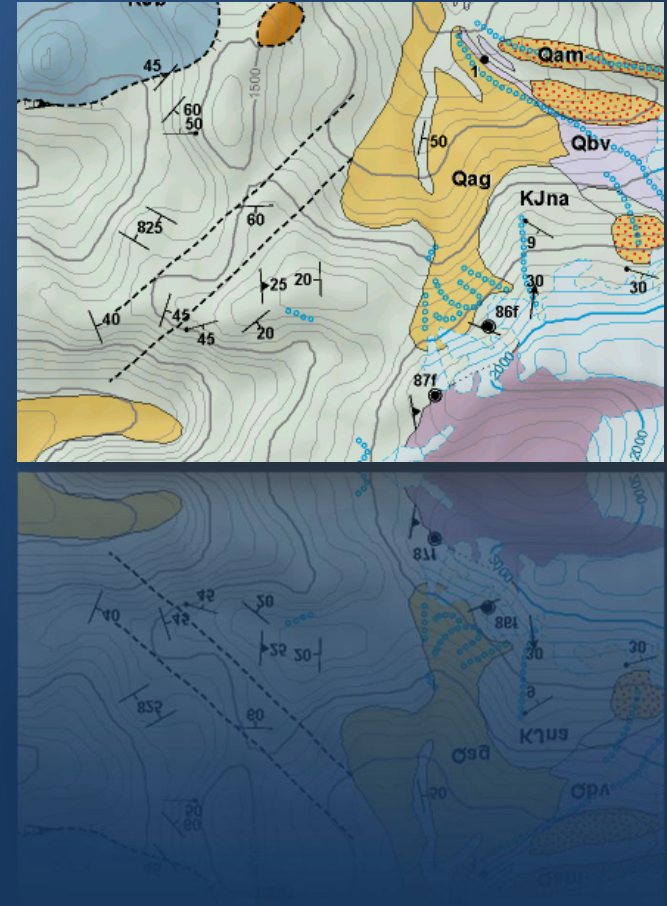
Topographic

Imagery



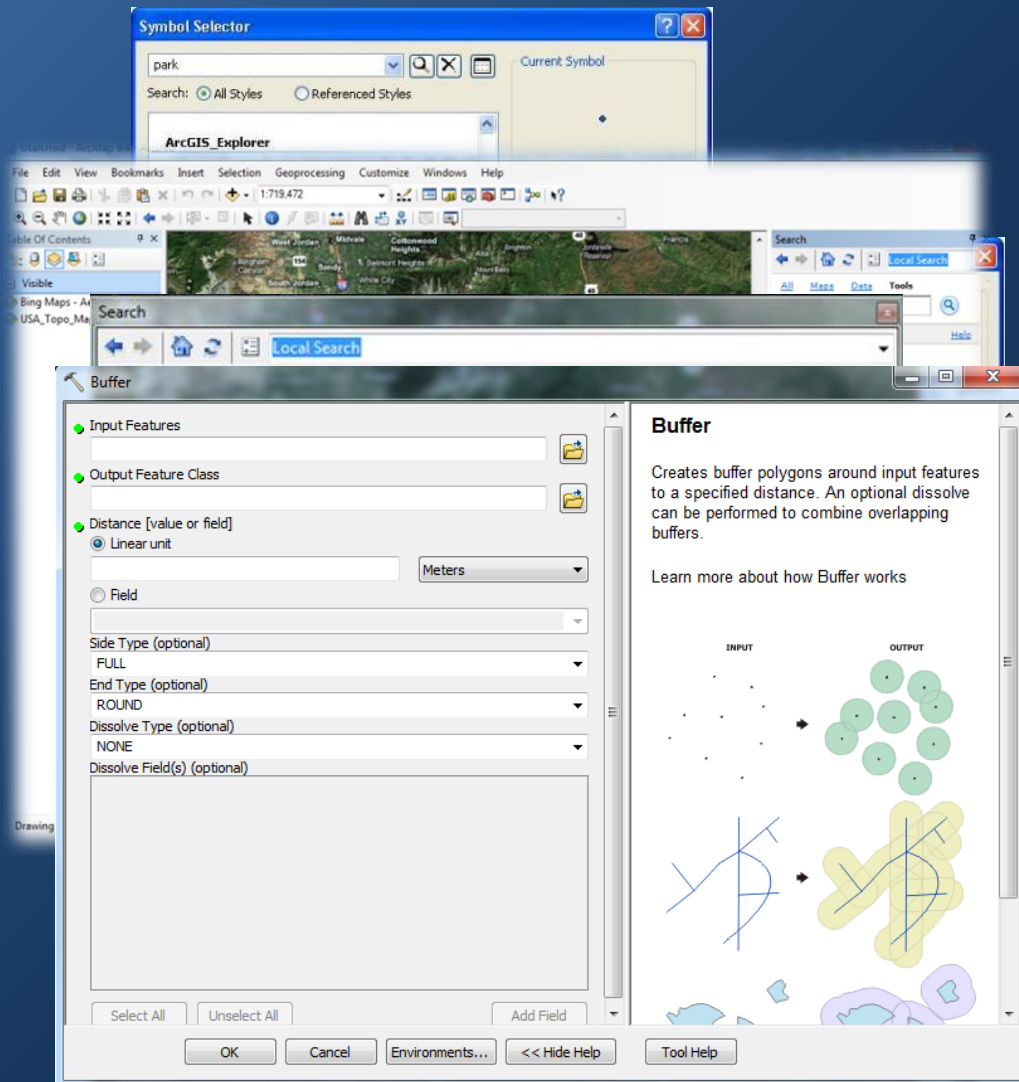
ArcGIS 10 Improves Map Display

- Fast navigation and display
 - New group layer called Basemap
 - Raster and Vector
 - Uses high performance drawing engine
- Time aware visualization
- Display Oracle and MS SQL Spatial data
- 3D Visualization



Quick and Easy Search

- Find Symbols
 - Filters
 - Symbol names and tags
 - Common search strings
- Find Tools
 - Auto complete
 - Preview Tool
 - Execute



Usability and Productivity

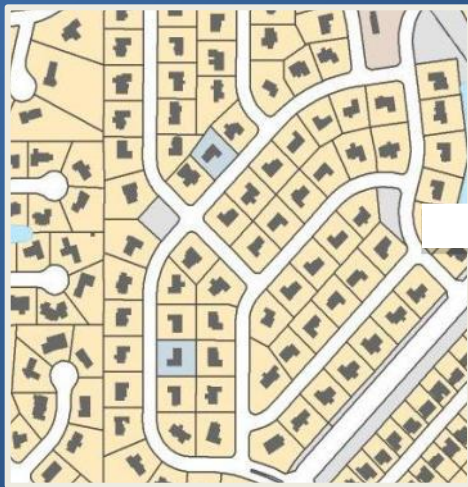
The image displays a collage of various ArcMap 9.4 interface components, illustrating the software's usability and productivity features. The background is a topographic map of a mountainous region.

- Main Map Window:** Titled "94 portland01.mxd - ArcMap 9.4 - ArcInfo". It shows a topographic map with a green buffer area overlaid on a road network.
- File Menu:** A dropdown menu is open, showing options: "Add Data...", "New Group Layer", and "New Basemap Layer".
- Search Window:** Titled "Search", it shows a search for "buffer" with 4 items returned. The first item is "Buffer (Analysis)".
- Symbol Selector Window:** Titled "Symbol Selector", it shows a search for "fire" with various fire-related symbols (e.g., Arson Fire F, Fire Hydrant Red, Fire Station) and a "Current Symbol" section with color, size, and angle settings.
- Catalog Window:** Titled "Catalog", it shows a tree view of data sources under "Maps and GDBs", including "LargeScales_18K_1K.gdb" and various local layers like "BikeRoute_Local", "BusLines_Local", etc.
- Table Window:** Titled "Table", it displays a table of "Tax Lots" with columns: TLID, Land Value, Building value, Improved Value, Building SQFT, Year Built, and Tax Code. The table shows data for several tax lots, with the first three rows highlighted in blue.

Focused on making you successful...

Author High Quality Maps

- ArcMap makes great maps for printing and the web
 - Improvements in Labeling, Representations and Templates
- New ArcInfo Tools for generating multi-scale maps
 - Focus on transportation and buildings
 - Reduce complexity and resolve conflicts



1:4k

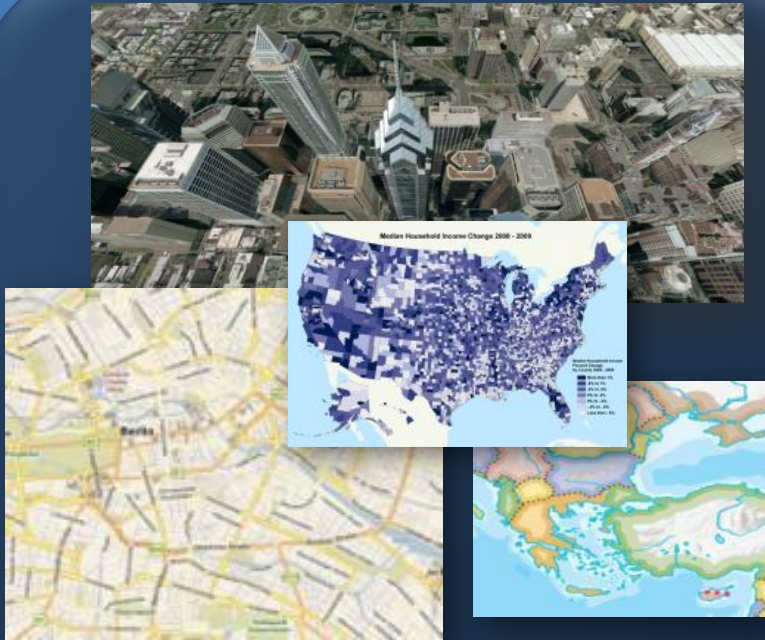


1:9k



1:18k

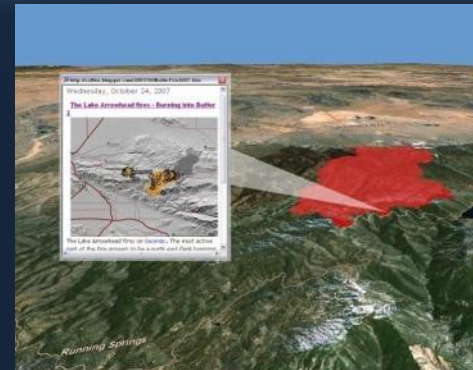
Sharing and Communicating Geographic Information



Printed Maps and Graphics



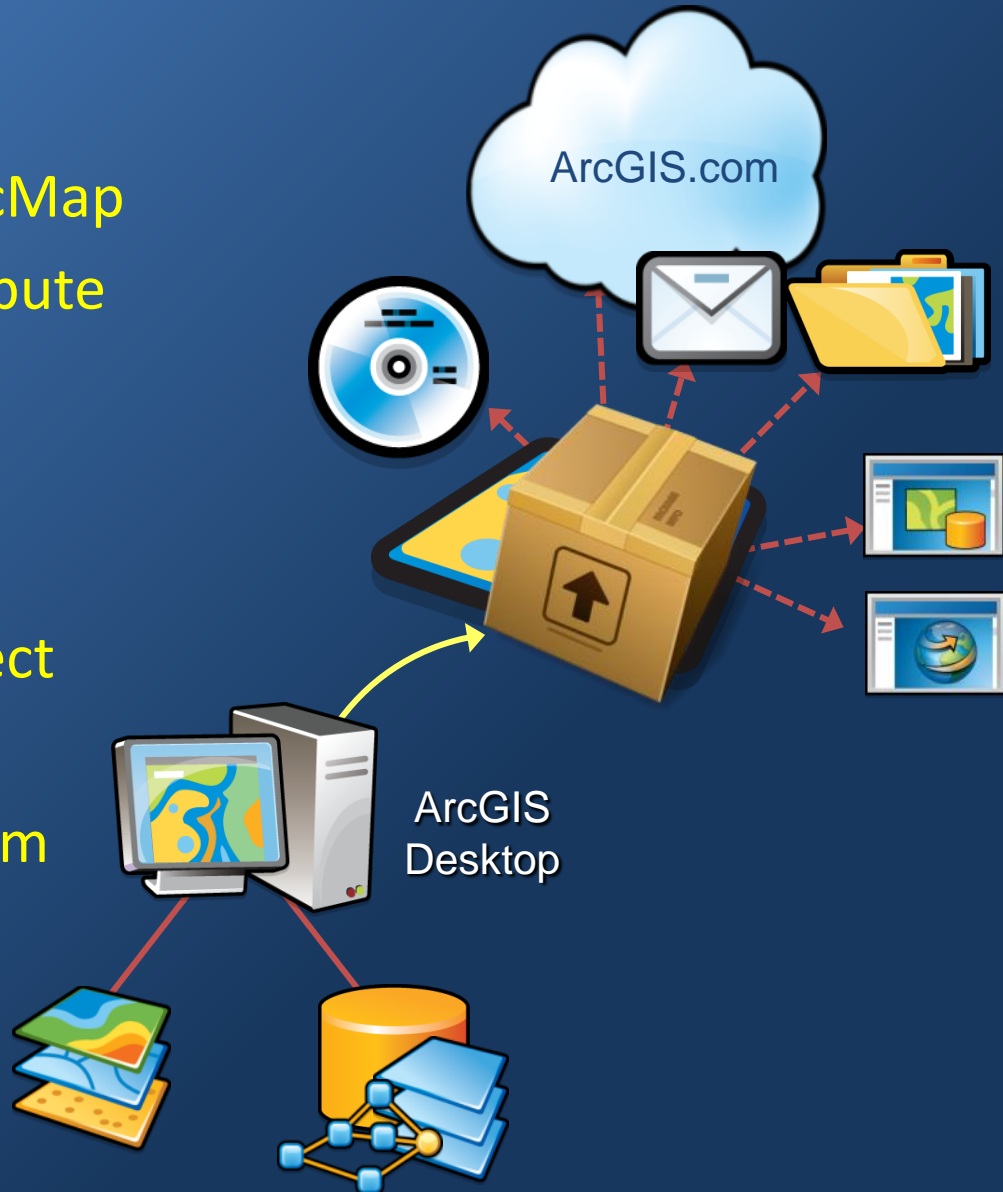
Video Animations



Interactive 2D and 3D Maps

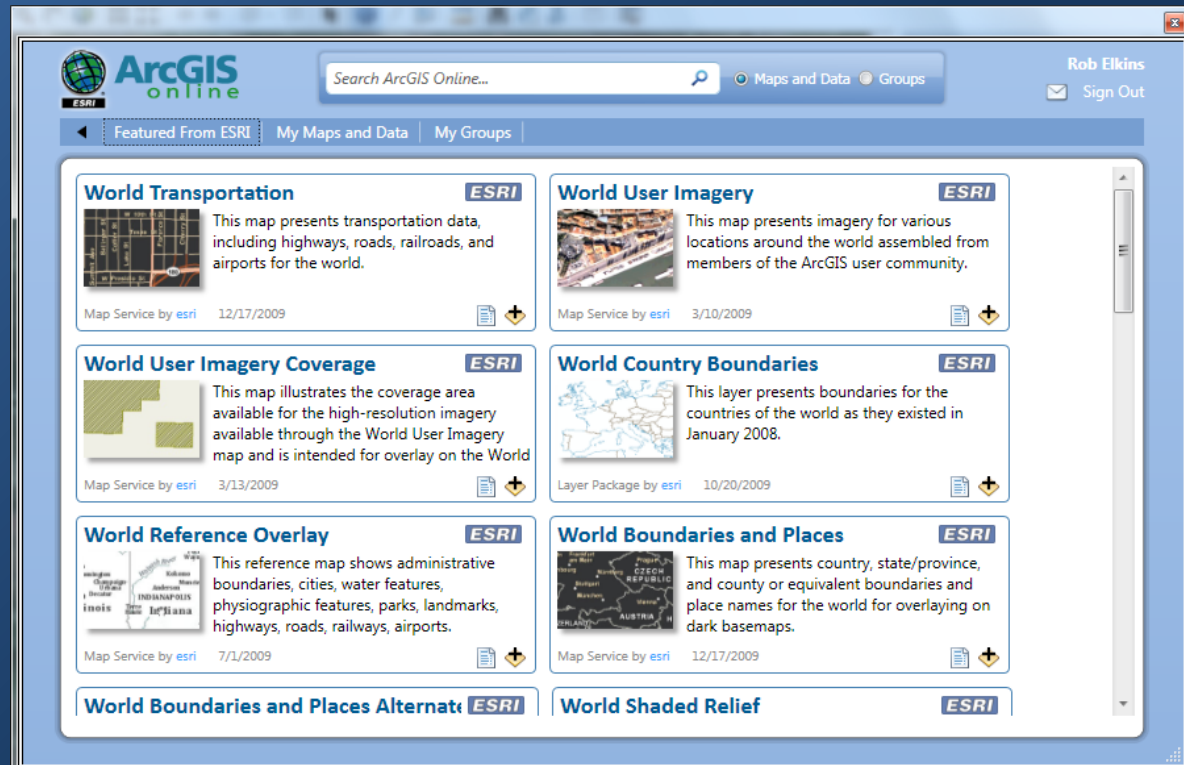
New Methods for Sharing

- Easy to create in ArcMap
- Many ways to distribute
 - Layers & Data
 - Maps & Layouts
- Share as a Packages
 - Layers & Data
 - Maps & Layouts
- Template for a project
- Peer to Peer
- Launch of ArcGIS.com



ArcGIS.com

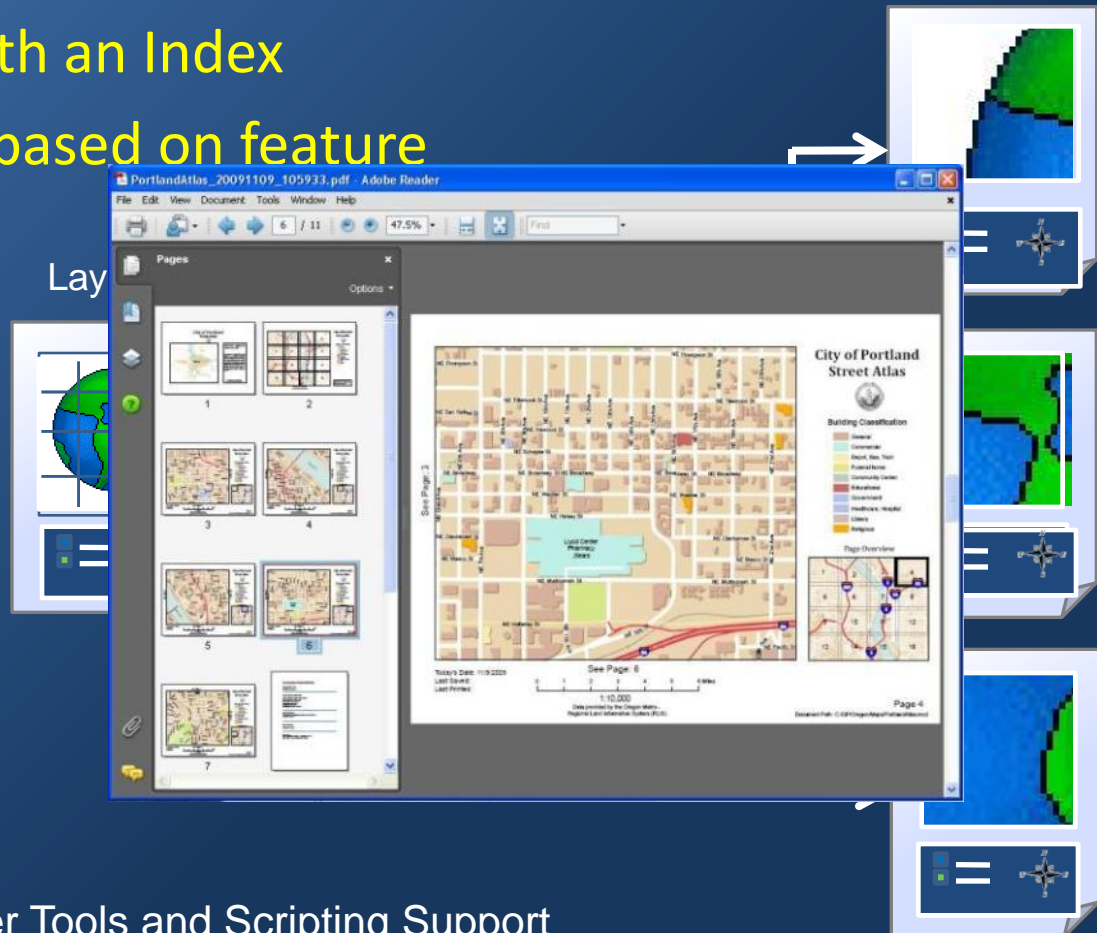
- More than ESRI content
- User community driven content
- My Maps and Data
- My Groups



Create Map Books and Atlases

- Part of ArGIS
- Data Driven Pages
 - Single layout with an Index
 - Multiple pages based on feature extents
 - PDF Support

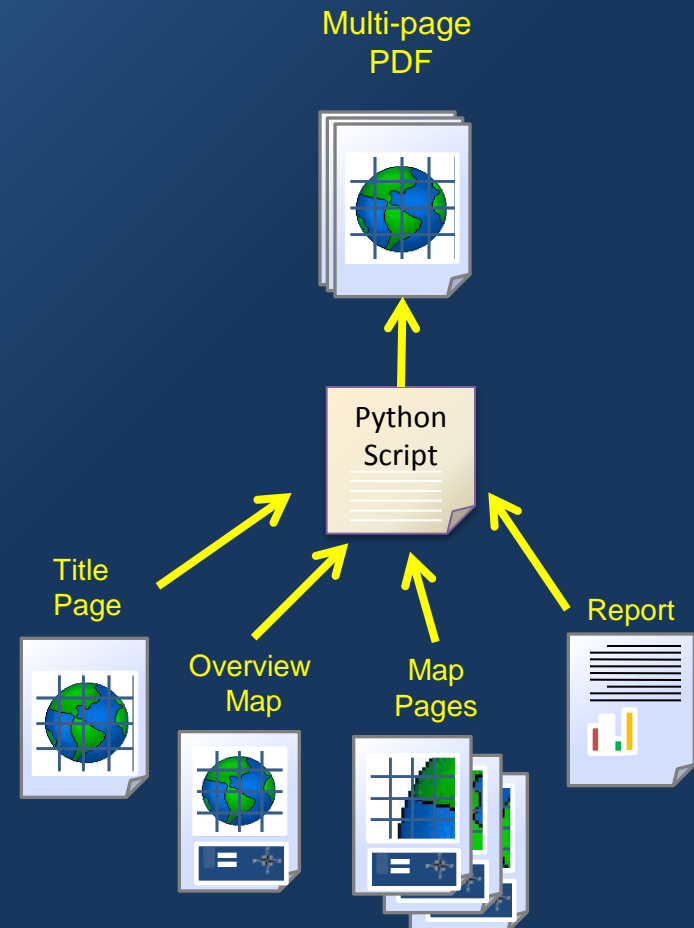
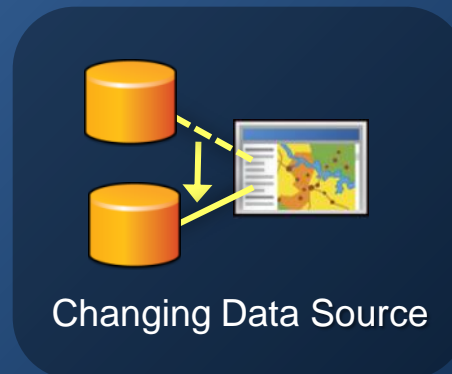
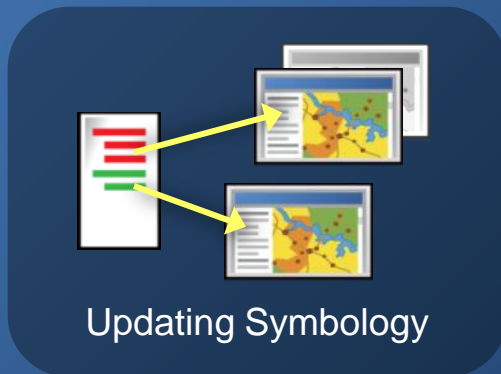
Data Driven Pages



End User Tools and Scripting Support

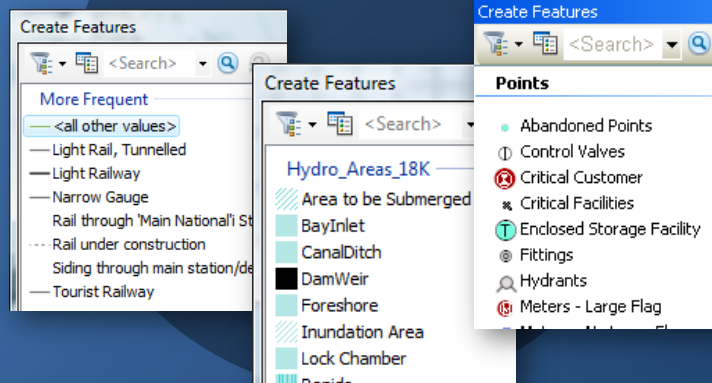
Automate Mapping Workflows

- New Python scripting
- Manage large numbers of map, layers and datasets
- Save time doing repeatable tasks
- Expose as a Geoprocessing Services



Better Tools for You to Edit

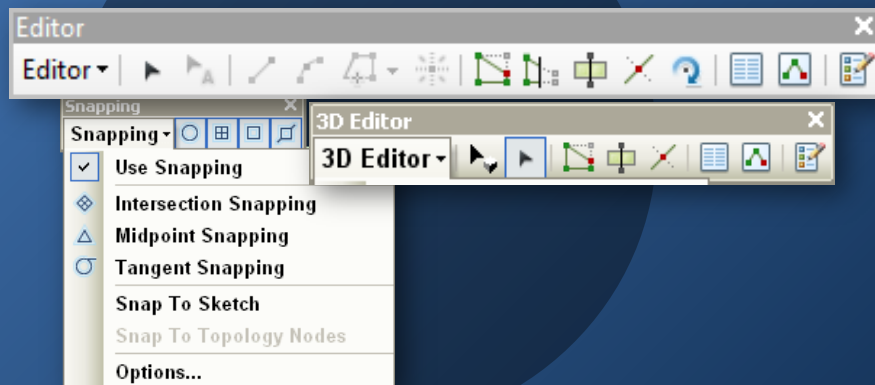
Select and Draw Features



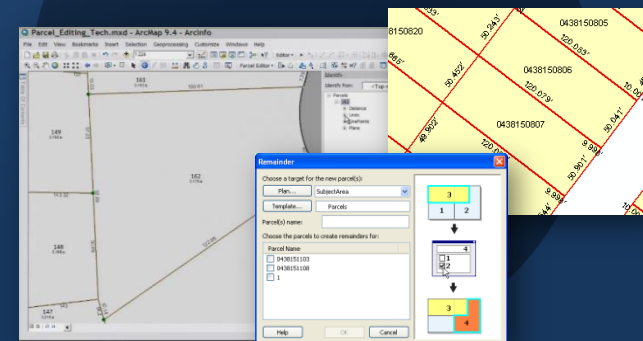
Share Templates



Easier Tools



Parcel Management



Improving Data Creation and Management Everywhere

New Editing Experience

- Layer-based
- Streamlined feature construction
- Simplified snapping environment
- Quick access to editing tools
- Efficient attribute update

The screenshot shows the 'Snapping' menu in SolidWorks. The menu is open, displaying several options. The 'Use Snapping' option is checked, indicated by a checkmark in a blue box. Below it are 'Intersection Snapping', 'Midpoint Snapping', and 'Tangent Snapping', each preceded by a blue icon representing its function. Further down are 'Snap To Sketch' and 'Snap To Topology Nodes'. At the bottom of the menu is 'Options...'. The 'Editor' button is partially visible at the bottom right of the image.

Attributes

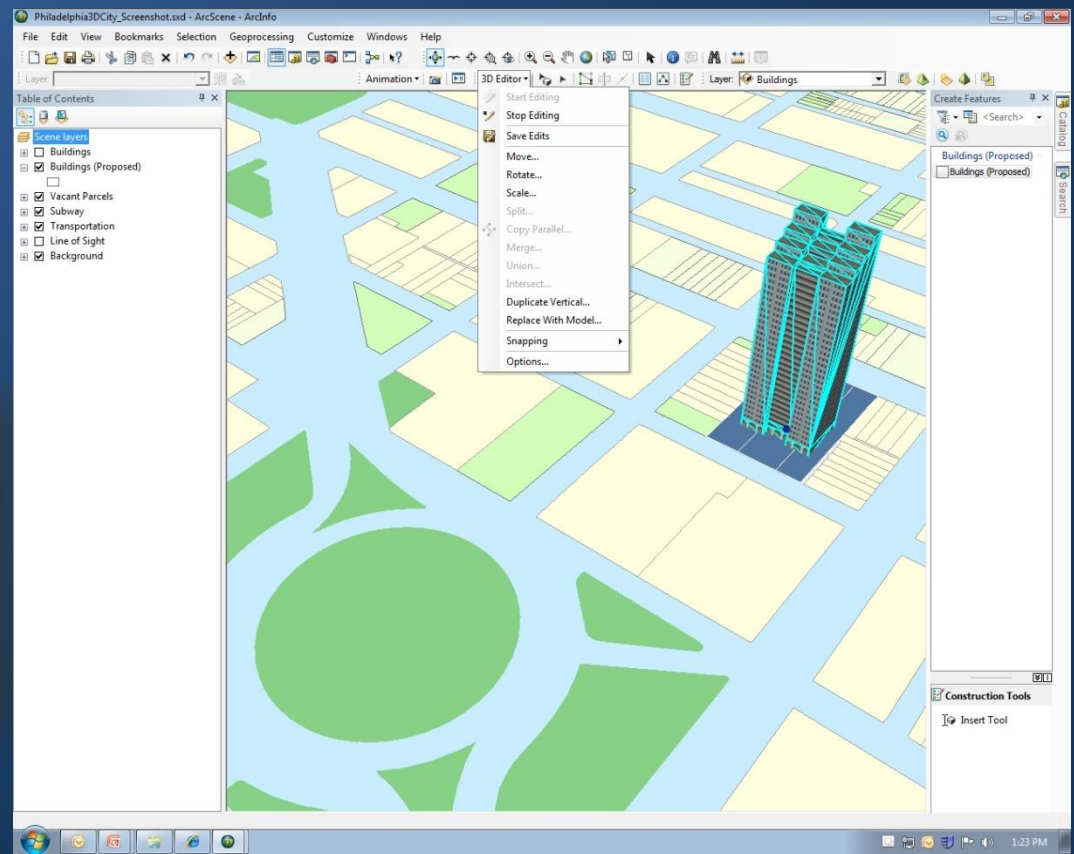
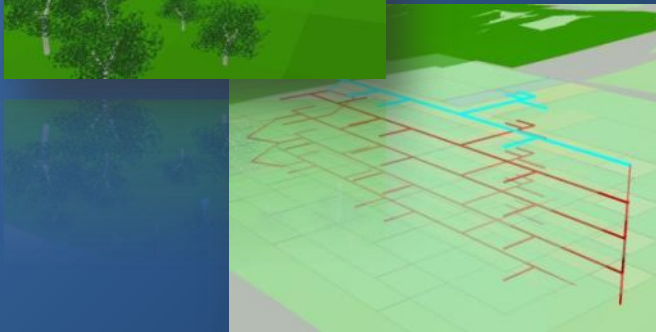
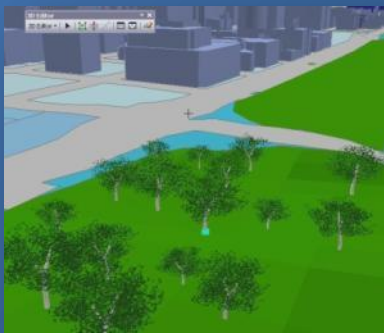
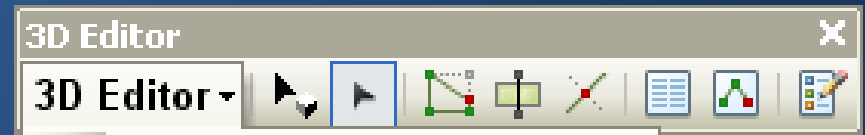
- Meter Setting
- Service Pipe
- Distribution Main
 - 1885
 - CP System
 - Crossing Inspection
 - Drip
 - Electric Survey
 - Gas Pipe Casing
 - 31
 - Leak Report
 - Pipe Exposure

Enabled	True
Creation User	Thomas Ward
Date Created	4/4/1995
Date Modified	4/25/2003
Last User	jan
Nominal Diameter	6"
Pipe Type	Non-Pinchable
System Operating Pres	60
Wall Thickness	1/2
Manufacturer	Thrall Distribution
Work Order ID	WO909080
Material	Plastic

Null values allowed

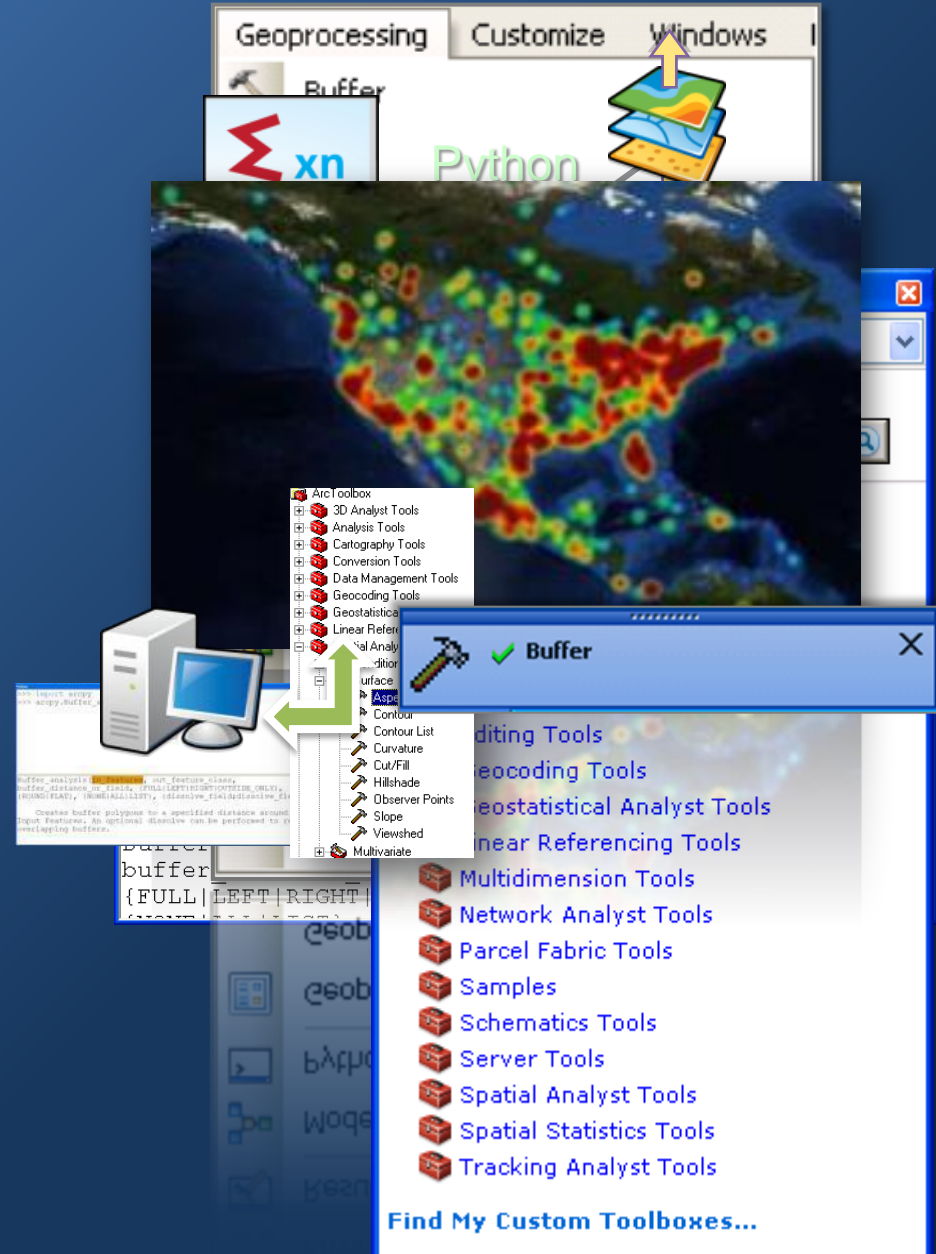
Editing in 3D

- Same editing experience as with 2D features
- 3D-specific tools
 - Model placement
 - Vertical line support



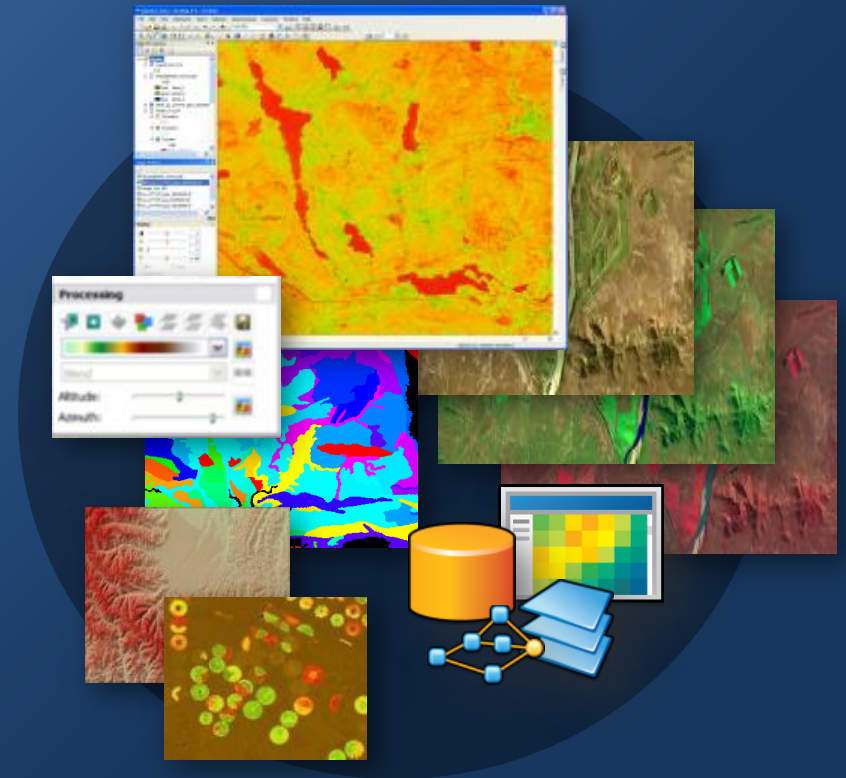
Geoprocessing

- Quick access to the Tools you need
 - Customizable Menu
 - Search
- Python is the way to automate your work
- More efficient processing
 - Up to 15x faster
 - Background execution



New Image Management Tools

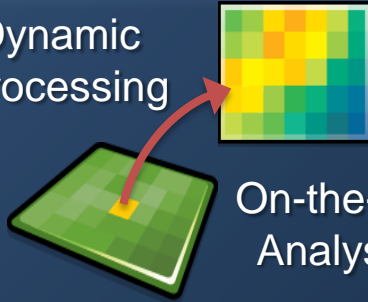
- Quick Access and Display
- Search and Discovery
- Metadata Access
- Temporal Query
- Image Analysis Window
 - Enhancement
 - Interpretation
 - On-The-Fly Processing
- Image Classification Tools
- Authoring for Serving



The Extensions get better...

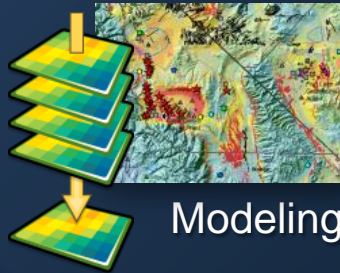
- The power of ArcGIS
- 130+ New Geoprocessing Tools
 - 750+ Tools in ArcGIS

Dynamic
Processing



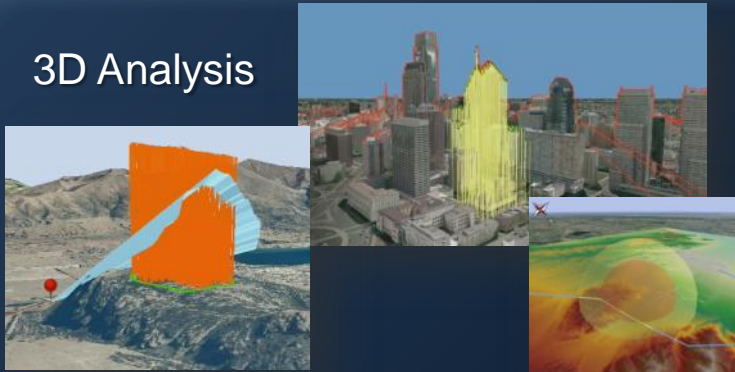
On-the-Fly
Analysis

Fuzzy Overlay

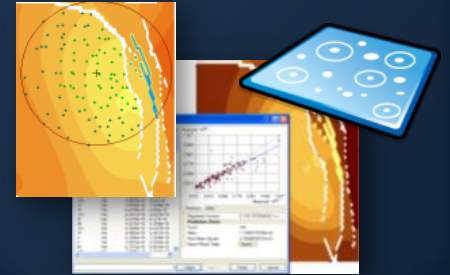


Modeling

3D Analysis



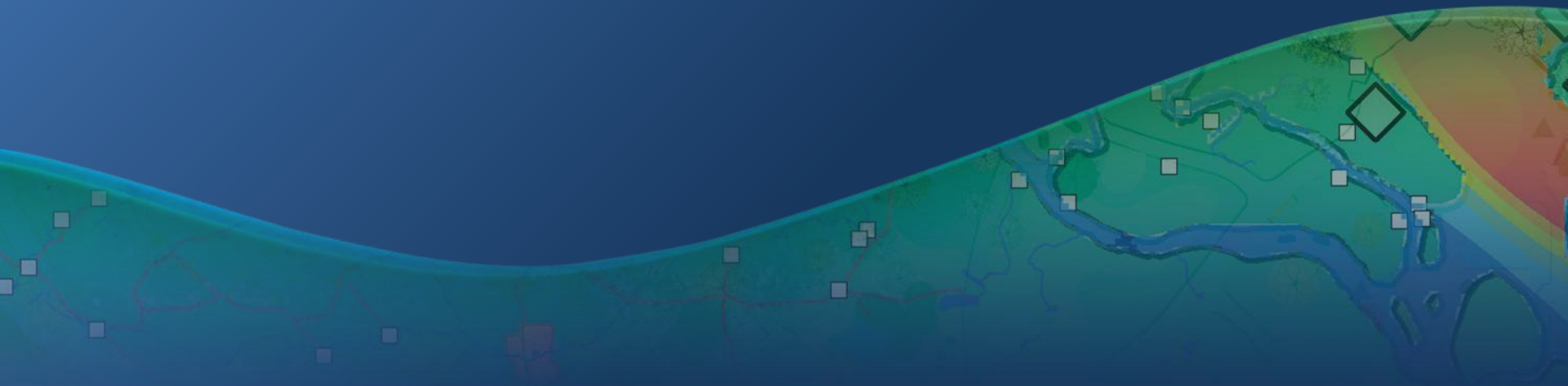
Ecological Sampling



Location /
Allocation

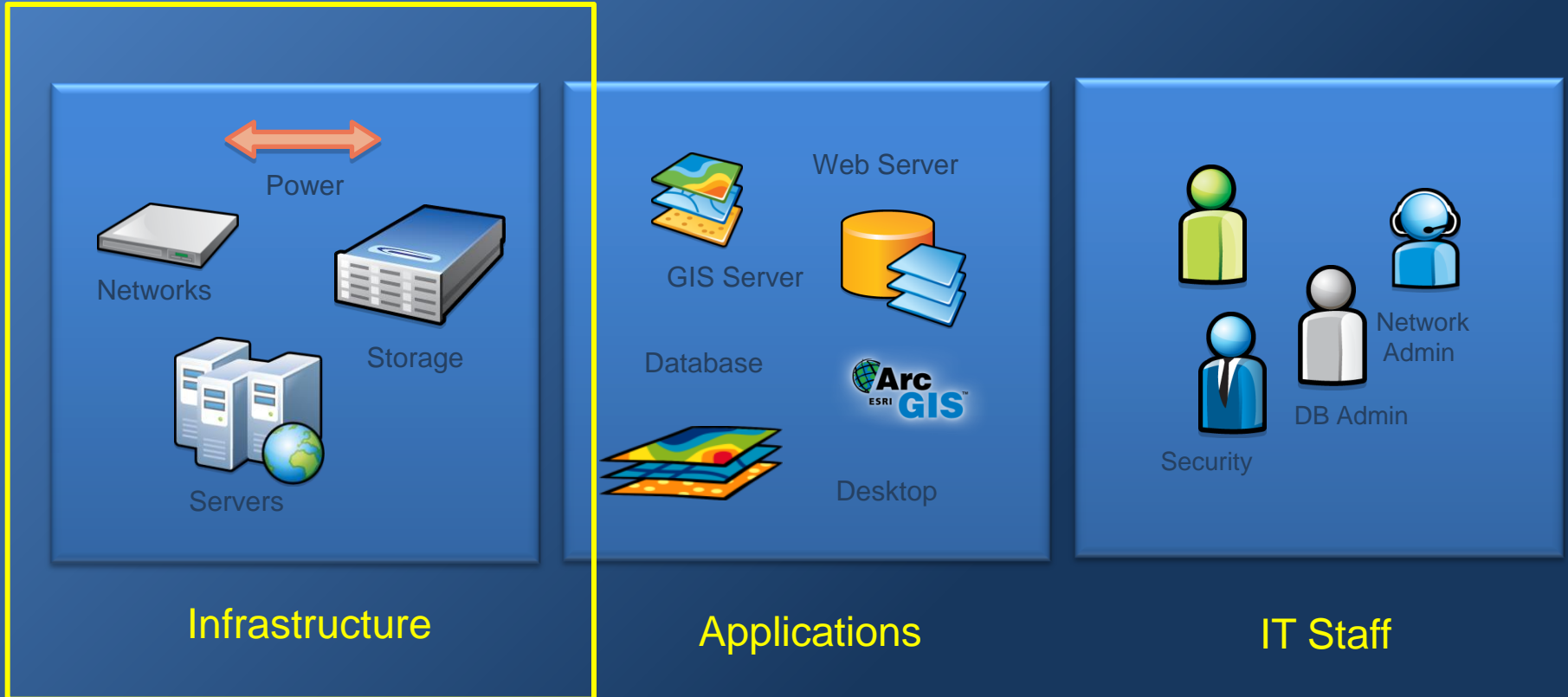


ArcGIS Server And The Amazon Cloud



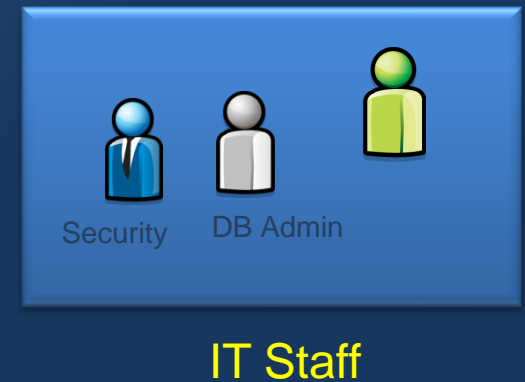
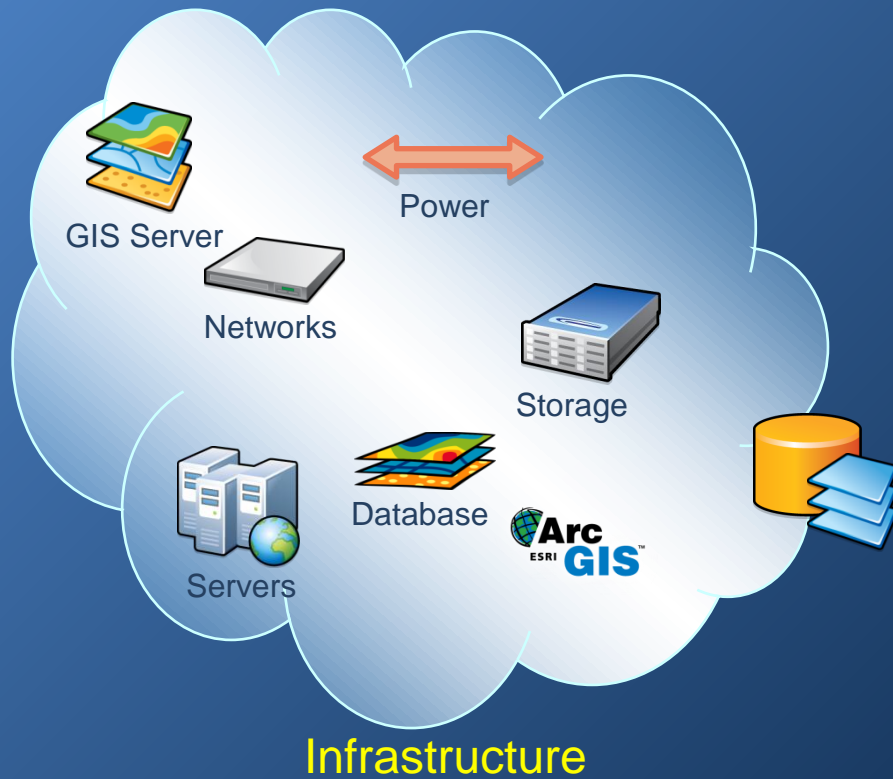
Traditional on-premise deployments

Face increasing costs in their IT infrastructure



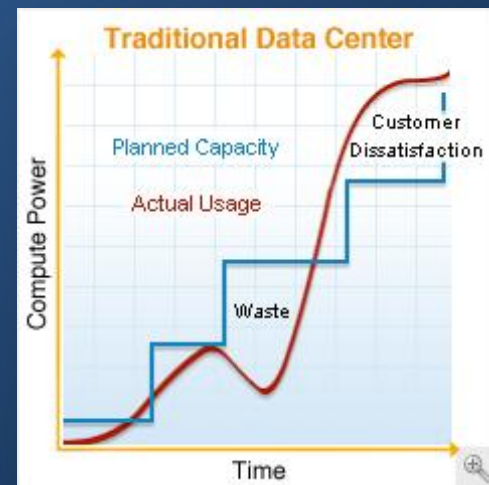
Amazon offers an Infrastructure in the Cloud

To run your applications on it



Understanding the Value Proposition of the Cloud

- Real time access to massive amounts of
 - Computing power (Servers)
 - Network bandwidth
 - Storage
- Simplified management of Infrastructure
 - Outsourced infrastructure
 - Preconfigured servers
 - Auto-scaling, and monitoring
- Reduced costs
 - Elastic computing



Elastic Computing



Development Environment

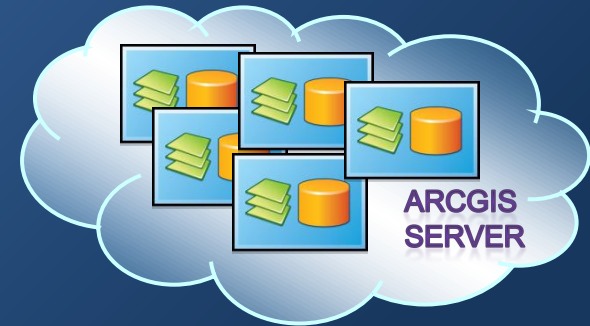


- Saves time:
 - Access a preconfigured ArcGIS Server instance in minutes
 - No need to allocate a machine within your organization
- Saves money:
 - Inexpensive servers available starting at less than a dollar per hour
 - ‘Terminate’ the dev machine when done (no capital investment)
- You may deploy your developed apps in the cloud... or on-premise

Massive Ad-Hoc GIS Tasks

Are well suited for an environment with virtually unlimited computing power

- Massive Analysis:
 - Routing
 - Suitability Analysis
 - Geostatistics
- Map caching
- Batch geocoding

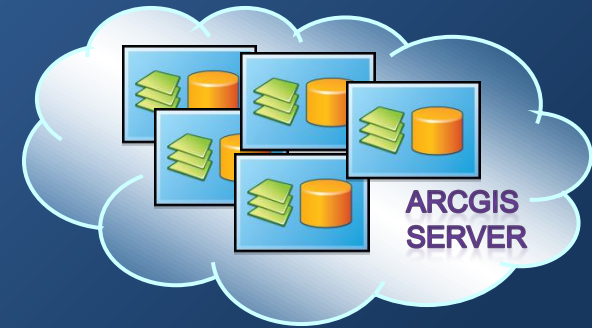


Saves Money and Time

Public Web Mapping Sites

Appealing for low budget sites and highly popular ones

- Simplified deployment
- High bandwidth
- Secure
- Scalable
- Resilient

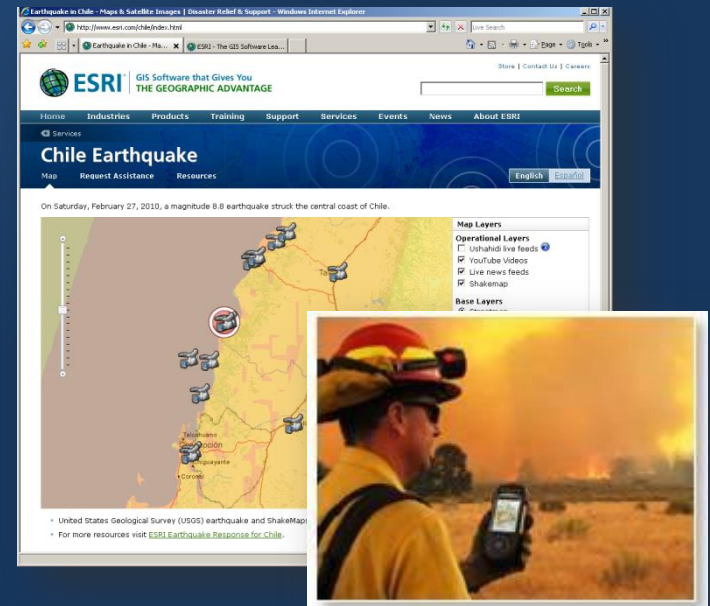
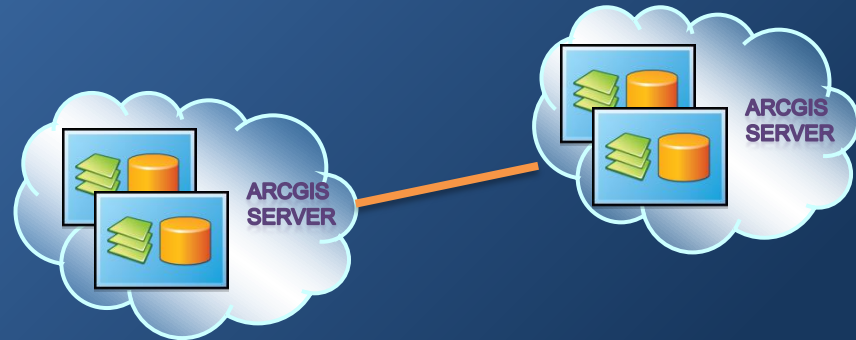


For small cities, large enterprises and others who cannot afford being down

Public Safety and Emergency Response

Up on the web in minutes. Replicated

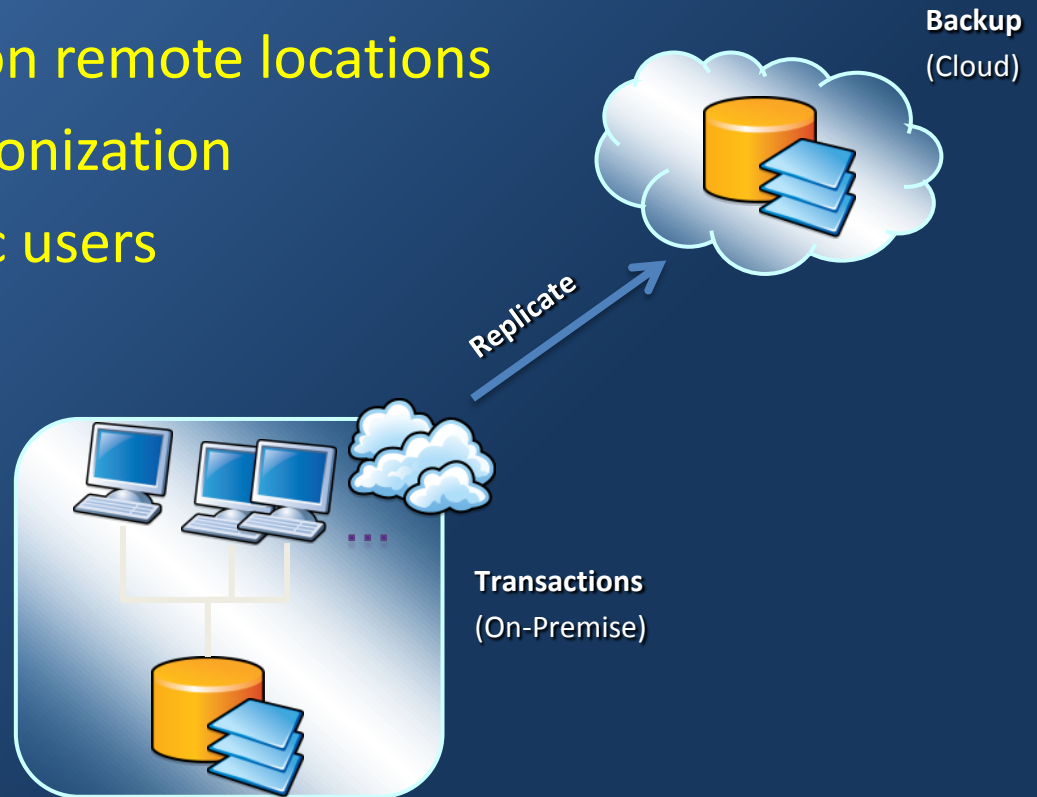
- Simplified deployment
- High bandwidth
- Secure
- Scalable
- Resilient



Geodatabase back-up in the cloud

Secure storage of your geographic data for disaster recovery

- Geodatabase storage on remote locations
- Secure periodic synchronization
- For ArcGIS Server Basic users



Thank You!

- Questions?
- Anna Sokol
 - asokol@esri.com